

**Amendments to the Specification are as follows:**

Please amend the paragraph beginning on page 3, line 25 and ending on page 4, line 8 as follows:

In addition, a magnetic sensor disclosed in Japanese Unexamined Patent Application Publication No. 8-7235 has a buffer layer 62 formed of tantalum (Ta) as an underlayer and a pinned ferromagnetic layer 70 provided thereon. The pinned ferromagnetic layer 70 has a multilayer structure composed of a first cobalt (Co) film 72, a second cobalt (Co) film 74, and a ruthenium (Ru) film 73 provided therebetween. The magnetizations of the first Co film 72 and the second Co film 74 are fixed by individual anisotropic magnetic fields. The first Co film 72 and the second Co film 74 are antiferromagnetically coupled with each other and are magnetized in the directions antiparallel to each other.

Please amend the paragraph on page 4, lines 9-15 as follows:

According to this magnetic sensor, an antiferromagnetic layer for fixing the magnetization of the pinned ferromagnetic layer 70 is not provided, unlike that disclosed in Japanese Unexamined Patent Application Publication No. 2000-163717. Hence, compared to the case of Japanese Unexamined Patent Application Publication No. 2000-163717, the shunt loss can be decreased.

Please amend the paragraph on page 4, lines 16-22 as follows:

However, in the structure in which Co films are provided on a buffer layer composed of tantalum, as described above in Japanese Unexamined Patent Application Publication No. 8-7235, it was found that the direction of magnetization of the pinned ferromagnetic layer 70 cannot be appropriately fixed. This problem is also described in Japanese Unexamined Patent Application Publication No. 2000-113418.

Please amend the paragraph on page 55, lines 5-10 as follows:

On the other hand, since being it is in contact with the nonmagnetic material layer 15 and has a significant influence on the magnetoresistive effect, when the second magnetic layer 18 is formed of Co or  $\text{Co}_x\text{Fe}_y$  (where

$y \leq 20$  and  $x+y=100$  are satisfied) having an fcc structure, the magnetoresistive effect is not so much degraded.

Please amend the paragraph on page 60, lines 16-25 as follows:

Figs. 14 to 16 are partial cross-sectional views showing other embodiments of the fixed magnetic layer 116 (although the fixed magnetic layer 16 provided with the antiferromagnetic layers formed thereon may also be applied to the same embodiments as mentioned above, in these embodiments, the fixed magnetic layer 116 will be described which is provided with the antiferromagnetic layers formed thereunder). In addition, Figs. 14 to 16 are enlarged views of the fixed magnetic layer 116 in vicinity of the element central portion shown in Fig. 8.